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S.N. 10/501,878
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REMARKS:

Claims 1-8 are currently pending. Claims 1 and 4 are amended.

35 USC § 112 ¶2 Rejections

Claims 1-8 are rejected as allegedly being indefinite for failing to set forth the subject which the Applicants regard as their invention. Additionally, the Examiner states that Claim 4 is unclear in regards to the steps of said Claim.

Applicants respectfully request withdrawal of the § 112 rejections in light of the amended Claims contained herein.

Claim Rejections under 35 USC § 102

Claims 1-3 and 5-6 are allegedly anticipated by US 3,847,968. The Examiner lists steps from the cited art which are the basis for the rejection. Applicants respectfully disagree.

Anticipation can only be established by a single prior art reference which discloses each and every element of the claimed invention. *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as it is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

US 3,847,968 teaches a method of producing styrene wherein a steam-to-ethylbenzene molar ratio of at least 6 to 1 is required and preferably 10:1 to 13:1. Moreover, in example II, a molar ratio of 13.7 is employed (*See* column 3, line 9-15 and column 6, line 1ff). Accordingly, US 3,847,968 fails to teach the molar ratio of amended Claim 1, 5.95:1 to 1:1, and as such, fails to anticipate the instant invention. Favorable action is solicited.

Claim Rejections under 35 USC § 103

Claims 4 and 7-8 are rejected for allegedly being obvious in light of US 3,847,968. The Examiner states that because of the unclearness of Claim 4, the steps of the cited art are not different from the instant process.

To establish *prima facie* obviousness, the Examiner must show in the prior art some suggestion or motivation to make the claimed invention, a reasonable expectation for success in doing so, and a teaching or suggestion of each Claim element (*see, e.g., In re Fine*, 837 F.2d

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1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ 2d 1941 (Fed. Cir. 1992); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986); *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

For similar reasons as listed above for the § 102 rejections, Applicants respectfully request withdrawal of the rejection under 35 USC § 103.

Moreover, the instant inventors discovered that, surprisingly, styrene can be produced via a steam to ethylbenzene ratio of from 5.95:1 to 1:1 wherein said production proceeds with high ethylbenzene conversions and high relative space-time yields (*See e.g.*, examples of the instant invention). Thus, the presently claimed method advantageously provides for a reduction in capital equipment and energy requirements.

Accordingly, the teachings of US 3,847,968 would not provide the required motivation or expectation of success for practicing the instant invention to achieve the unexpected results contained therein. Favorable action is solicited.